

# PATENT ABSTRACTS OF JAPAN

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## (54) DISK SURFACE DEFECT-INSPECTING DEVICE

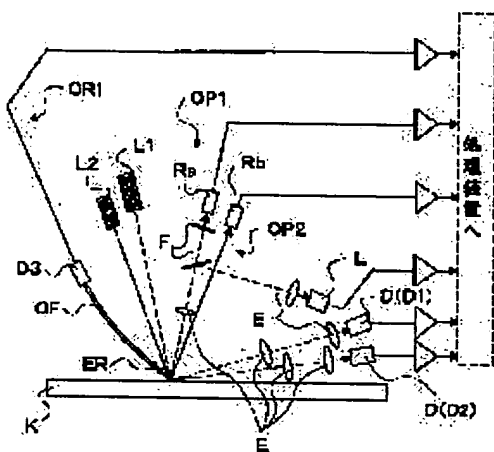
(57)Abstract:

**PROBLEM TO BE SOLVED:** To selectively detect a circle scratch defect and accurately discriminate a circle scratch defect from the scratch defect for detection by condensing only scattered light with sharp directivity in the prescribed direction.

**SOLUTION:** A light reception system OR1 for detecting a circle scratch defect is composed of a condensing lens ER that is arranged in specific elevation from a disk surface, a photo detector D3 for detecting light being condensed by the condensing lens ER, and an optical fiber OF for propagating light being condensed from the condensing lens ER to the photo detector D3.

When the circle scratch defect exists, a laser spot is scattered. Therefore, with a position where scattered light appears most strongly, since the scattered light appears most strongly in the direction opposite to the incident angle of the

laser beam at a position of back scattering of 25 degrees, namely an elevation of 45 degrees from a disk surface when the incidence angle of a laser beam being applied to, for example, a first light transmission system L1 is 70 degrees, the condensing lens ER is arranged at that position for efficiently condensing the back scattering light.



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